

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Claim 1 (Currently Amended): A demultiplexer, comprising
a first section capable of receiving a WDM beam,
a diffraction grating integrally formed in the first section, the WDM beam being directed onto the internal surface of the diffraction grating, the diffraction grating providing angularly separated beams on the external surface of the diffraction grating;
a second section integrally formed with the first section; and
a third section integrally formed with the second section, the third section positioned relative to the first section to receive spatially separated light beams of a selected diffraction order from the diffraction grating,
wherein the first section, the second section, ~~and~~ the third section, and the diffraction grating are integrally formed in a single piece using a molding process.

Claim 2 (Previously presented): The demultiplexer of Claim 1, further including a reflective surface integrally formed on the first section that directs the WDM beam received into the first section onto a bottom surface of the diffraction grating.

Claim 3 (Previously presented): The demultiplexer of Claim 2, wherein the reflective surface is coated external to the first section with thin film to enhance internal reflection of the WDM beam.

Claim 4 (Previously presented): The demultiplexer of Claim 2, wherein the reflective surface is coated with a reflective film.

Claim 5 (Previously presented): The demultiplexer of Claim 4, wherein the reflective film is a gold film.

Claim 6 (Previously presented): The demultiplexer of Claim 4, wherein the reflective film is a silver film.

Claim 7 (Previously presented): The demultiplexer of Claim 1, wherein the first section includes an integrally formed collimating lens integrally formed into the single piece, the integrally formed collimating lens collimating the WDM beam received from an optical fiber.

Claim 8 (Previously presented): The demultiplexer of Claim 7, further including a barrel integrally formed into the single piece with the first section, the barrel capable of receiving an optical fiber and aligning the optical fiber with the collimating lens.

Claim 9 (Previously presented): The demultiplexer of Claim 7, further including a post integrally formed into the single piece with the first section, the post capable of receiving a barrel, the barrel capable of receiving an optical fiber and aligning the optical fiber with the collimating lens.

Claim 10 (Original): The demultiplexer of Claim 8, wherein the barrel includes a fiber access and a fiber stop.

Claim 11 (Original): The demultiplexer of Claim 9, wherein the barrel includes a fiber access and a fiber stop.

Claim 12 (Original): The demultiplexer of Claim 1, wherein the third section includes a focusing lens.

Claim 13 (Original): The demultiplexer of Claim 12, wherein the third section further includes a support around the focusing lens.

Claim 14 (Original): The demultiplexer of Claim 13, wherein a detector array can be mounted on the support so that the spatially separated beams are directed onto individual detectors of the detector array.

Claim 15 (Previously presented): The demultiplexer of Claim 13, wherein optical fibers are arranged to receive individual ones of the spatially separated beams.

Claims 16-22 (Canceled).

Claim 23 (Currently Amended): A demultiplexer, comprising:

means for separating an input light beam into constituent parts with ~~an integrally formed~~
a molded single piece component;

means for detecting the constituent parts from the ~~integrally formed~~ molded single piece
component;

means for aligning the means for separating with the means for detecting.